

Applicant(s): Cheng, et al.
Serial No.: 09/736,069
Filed: December 13, 2000
For: THE ARCHITECTURE OF A HAVi-WEB BRIDGE
Art Unit: 2154
Examiner: Patel, Ashokkumar B.

Attorney Docket No.: US 000045

IN THE CLAIMS:

Please consider the following claims:

1. (Currently Amended) A bridge that is configured to facilitate communications between a first network of Non-IP-compatible entities and a second network of IP-compatible entities, comprising:

a Non-IP to IP interface to facilitate communications between an application entity on the first network and a Web server on the second network comprising:

an IP Web client that is operably coupled to the second network to selectively translate a first set of communications between the Web server and the first network, and to pass a second set of communications between the Web server and the first network without translation;

a Non-IP Web proxy that is operably coupled to the IP Web client and the first network, and is configured to make the IP Web client compliant with middleware that is associated with the Non-IP network; and

a Non-IP Web proxy client that is operably coupled to the Non-IP Web proxy and the first network, and is configured to allow the application entity to access the Web server; and

an IP to Non-IP interface to facilitate communications between a Web browser on the second network and a Non-IP device entity on the first network, comprising:

a Non-IP Web server that is operably coupled to the second network, to selectively translate a first set of communications between the Web browser and the first network, and to pass a second set of communications between the Web browser and the first network without translation;

a Web service executor that is operably coupled to the Non-IP web server and to the first network, and is configured to provide access to the Non-IP device entity;

a Web page generator that is operably coupled to the Non-IP Web Server and to the first network, and is configured to generate web pages for presentation to the Web browser; and

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a translation manager that is operably coupled to the Non-IP Web server, the Web service executor, and the Web page generator, and is configured to provide service-to-user-interface and message-to-methods translation services.

2-3. (Cancelled)

4. (Previously Presented) The bridge as claimed in claim 1, wherein
the Non-IP Web proxy is configured to facilitate communications between the Web server and a Non-IP service.

5-7. (Cancelled)

8. (Currently Amended) A Non-IP network comprising
at least one Non-IP-compatible device; and
a bridge device that includes:
a Non-IP to IP interface to facilitate communications between an application entity on the Non-IP network and a Web server on an IP network comprising:
an IP Web client that is operably coupled to the IP network, to selectively translate a first set of communications between the Web server and the Non-IP network, and to pass a second set of communications between the Web server and the Non-IP network without translation;
a Non-IP Web proxy that is operably coupled to the IP Web client and the Non-IP network, and is configured to make the IP Web client compliant with middleware that is associated with the Non-IP network; and
a Non-IP Web proxy client that is operably coupled to the Non-IP Web proxy and the Non-IP network, and is configured to allow the application entity to access the Web server; and

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an IP to Non-IP interface to facilitate communications between a Web browser on the IP network and the at least one Non-IP-compatible device on the Non-IP network comprising:
a translation manager suitable to provide service-to-user-interface and message-to-methods translation services.

9-10. (Cancelled)

11. (Currently Amended) The Non-IP network as claimed in claim 8, wherein the IP to Non-IP interface further includes:

a Non-IP Web server that is operably coupled to the IP network, and is configured to appear as an Internet server to the Web browser;

a Web service executor that is operably coupled to the Non-IP Web server and to the Non-IP network, and is configured to provide access to the at least one Non-IP-compatible device; and

a Web page generator that is operably coupled to the Non-IP Web server and to the Non-IP network, and is configured to generate web pages for presentation to the Web browser; and,
~~a wherein the translation manager that is operably coupled to the Non-IP Web server, to the Web service executor, and to the Web page generator, and is configured to provide service-to-user-interface and message-to-methods translation services.~~

12. (Original) The Non-IP network as claimed in claim 11, wherein

the Non-IP Web server is configured to selectively translate a first set of communications between the Web browser and the Non-IP network, and to pass a second set of communications between the Web browser and the Non-IP network without translation.

13. (Currently Amended) A method of enabling interactions between a Non-IP network and an IP network, comprising:

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establishing an IP connection between a browser on the IP network and a server at a bridge element,

communicating a web page corresponding to the server to the browser,

receiving a user input from the browser to the server, based on the web page,

processing the user input to produce one or more commands related to an object on the Non-IP network, and

communicating the one or more commands to the object, wherein a first set of communications are selectively translated via a translation manager operatively connected to the Non-IP Web network and suitable to provide service-to-user-interface and message-to-methods translation services, and passed between the browser and the Non-IP network, and a second set of communications are passed between the browser and the Non-IP network without translation.

14. (Original) The method of claim 13, further including:

determining a status corresponding to the object on the Non-IP network,

creating a web page corresponding to a status of the object, and

communicating the web page from the server to the browser.

15. (Original) The method of claim 13, further including:

receiving an access request from a Non-IP-compatible application,

communicating the access request to a Web server on the IP network,

receiving a web page corresponding to the Web server, and

communicating messages corresponding to the web page to the Non-IP-compatible application.